UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/571,802	12/13/1995	DOUGLAS N. ISHII		3216

7590 02/07/2003

JANELLE D WAACK
ARNOLD WHITE AND DURKEE
P O BOX 4433
HOUSTON, TX 772104433

EXAMINER	
PAK, MICHAEL D	

ART UNIT	PAPER NUMBER
1646	26

DATE MAILED: 02/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 08/571,802	Applicant(s) Ishii
	Examiner Michael Pak	Art Unit 1646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Sep 1, 2000* .

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *24-71* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *24-71* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. The amendment filed 10 April 2000(Paper No. 23) has been entered.

2. Applicant's request for reconsideration of the finality of the rejection of the last Office action due to typographical errors is persuasive and, therefore, the finality of that action is withdrawn. Since the finality is withdrawn, the amendment of 10 April 2000(Paper No. 23) is also entered.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in the prior Office actions.

4. Applicant's arguments filed 10 April 2000(Paper No. 23), have been fully considered but they are not found persuasive.

5. The Declaration of Ishii under 37 CFR 1.132 filed 5 November 1998 (Paper No. 16) is insufficient to overcome the rejection of claims 24-71 based upon 35 U.S.C. 112, first paragraph because the Declaration is unsigned. The submission of the signed Declaration will overcome the this objection.

Claim Rejections - 35 USC § 112

6. Newly recited claims 24-71 are rejected under 35 U.S.C. 112,

second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 24-71 now recite the terms "IGF-I consists essentially of an amino acid sequence of a naturally occurring IGF-I" and "IGF-II consists essentially of an amino acid sequence of a naturally occurring IGF-II" which are confusing and ambiguous because the metes and bounds of the terms are not clear. Pages 5-6 of the specification define the terms "IGF-I" and "IGF-II but appear to be overlapping such that it is not clear when an IGF-I molecule homolog is not an IGF-II homolog molecule. No structure of the molecule is provided and the only functional term is provided.

7. Newly recited claims 24-71 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a written description and new matter rejection.

Claims 24-71 now encompass the terms "IGF-I" and "IGF-II" which encompasses a proteins which are allelic variants because of the definition of "IGF-I" and "IGF-II" on pages 5-6 of the

specification. Thus, claims encompass a subgenus of "naturally occurring allelic variants" which is not disclosed in the specification. The ordinary meaning of the term allele is one of two or more alternate forms of a gene occupying the same locus in a particular chromosome or linkage structure and differing from other alleles of the locus at one or more mutation sites (see Rieger et al., *Glossary of Genetics* (1991), pages 16-17). However, the specification only discloses by name one species each of IGF-I and IGF-II in the working example. The general knowledge in the art concerning alleles does not provide any indication of how the structure of one allele is representative of unknown alleles. The nature of alleles is such that they are variant structures and in the present state of the art the structure of one does not provide guidance to the structure of others. The common attributes of the genus are not described. One of skill in the art would conclude that applicant was not in possession of the claimed genus because a description of only one member of this genus is not representative of the variants of the genus and is insufficient to support the claim. *University of California v. Eli Lilly and Co. (CAFC) 43 USPQ2d 1398* held that a generic claim to human or mammalian when only the rat protein sequence was disclosed did not have written description in the specification.

Claims 24-71 now encompass the terms "IGF-I consists essentially of an amino acid sequence of a naturally occurring IGF-I" and "IGF-II consists essentially of an amino acid sequence of a naturally occurring IGF-II" which is new matter because the claim limitations are **not disclosed in the specification.** Pages 5-6 of the specification define the terms "IGF-I" and "IGF-II" which are generic and does not provide support for the subgeneric limitations claimed.

Claims 24-71 now encompass the terms "parenteral nonintracranial adminstration" which are **not disclosed in the specification.** The original claims recite parenteral adminstration which is generic and does not provide support for the subgeneric limitations claimed.

8. Claims 24-71 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of parenteral administration of species of IGF-I, IGF-II, or a combination of both IGF-I and II for the treatment of locus ceruleus noradrenergic neurons ablation by 6-hydroxydopamine, does not reasonably provide the full scope of enablement for parenteral administration of IGF-I or IGF-II, for traumatic injury of the central nervous system (CNS) or spinal cord and treating stroke. The specification does not enable any person skilled in the art to which it pertains, or with which it is most

nearly connected, to make and use the invention commensurate in scope with these claims for the reasons set forth in the past office actions.

The rejection set forth in action mailed 1 May 1998 (Paper No. 13) has been reinstated because The Declaration of Ishii under 37 CFR 1.132 filed 5 November 1998 (Paper No. 16) is unsigned. The submission of the signed Declaration will overcome the this rejection.

The terms "traumatic injury to the central nervous system" encompass a physical or mental injury to the central nervous system(see Stedman's Medical Dictionary(U)). Thus, claims 24-33 encompass any physical or mental injury to the CNS. However, as discussed in the past office actions, the specification does not enable the full scope of the claimed invention.

The terms "traumatic brain injury" encompass a physical or mental injury to the brain(see Stedman's Medical Dictionary(U)). Thus, claims 40-45 encompass any physical or mental injury to the brain. However, as discussed in the past office actions, the specification does not enable the full scope of the claimed invention.

The term "stroke" encompass both ischemic or hemorrhagic legsions. Thus, claims 34-45 encompass treament for all types of stroke. However, the specification fails to teach the treatment for the full scope of stroke diseases. The state of the art is

silent with respect to using IGF to treat stroke (see Berkow et al.(V)). The treatments are related to using anticoagulants or treating atherosclerosis or hypertension, but not using IGF. Furthermore, the specification fails to make a nexus from the model of using IGF-I and II for the treatment of locus ceruleus noradrenergic neurons ablation by 6-hydroxydopamine to treating stroke or Parkinson disease. Without such guidance, the determination of IGF-I or -II effect on treating the full scope of stroke diseases requires empirical experimentation. Thus without further guidance, it would require undue experimentation to stroke by administering IGF- or IGF-II.

Applicant argues that the post-filing date evidnece clearly demonstrates the operativeness of the methods in a mammal as taught and claimed. However, applicant has failed to make a nexus from the model in the specification of using IGF-I and II for the treatment of locus ceruleus noradrenergic neurons ablation by 6-hydroxydopamine to treating stroke, traumatic injury to the CNS or the brain. Futhermore, the specification fails to teach the methods of adminstration of IGF which results in treating a model or the diseases of stroke or traumatic injury to the brain or CNS. The Declaration of Ishii was not signed.

Claim Rejections - 35 USC § 102

9. Claims 24-71 are rejected under 35 U.S.C. 102(e) as being

anticipated by Lewis et al.(A1).

The teachings of Lewis et al. has been set forth in the previous office actions.

Newly submitted claims 68-71 are dependent claims which encompass a method of treating with IGF damage to locus ceruleus associated with Parkinson's disease. Parkinson's disease is associated with damage to the locus ceruleus neurons. Thus, the treatment by the parenteral administration of IGF I or IGF II to treat Parkinson's disease comprise a nonintracranial administration of an IGF in an amount to effective to treat the disease.

Applicants argue that Lewis does not teach parenteral nonintracranial administration of unmodified IGF peptides reciting specific passages of Lewis. However, Lewis et al. not only teach intracranial administration to overcome the blood brain barrier but also teach the parenteral administration of IGFs which by definition is nonintracranial. Thus, Lewis et al. teach both parenteral and intracranial administration. Furthermore, the claimed limitation directed to IGF is the same scope as the IGF claimed which includes functional derivatives and unmodified IGF.

10. No claims are allowed.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D. Pak whose telephone number is (703) 305-7038. The examiner can normally be reached on Monday-Friday from 8:30 to 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler, can be reached on (703) 308-6564. The fax phone number for this Group is (703) 308-0294.

Official papers filed by fax should be directed to (703) 308-4242. Faxed draft or informal communications with the examiner should be directed to (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Michael D. Pak
Primary Patent Examiner
Art Unit 1646
16 January 2003

YVONNE EYLER, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER